Amendments to the Claims:

This listing will replace all prior versions, and listing, of claims in the application.

1. (currently amended) A method of forming air gaps within an integrated circuit structure, therewith forming a high quality inductor over a semiconductor substrate, comprising the steps of:

providing a semiconductor substrate with a partially fabricated integrated circuit structure having been created thereon and depositing a layer of dielectric ~~thereon~~ over the semiconductor substrate;

forming a metal layer on said dielectric layer;

depositing a first thin layer of oxide over said dielectric layer, thereby including said metal layer;

forming a structure for first cavities over said first thin layer of oxide and aligned with said metal layer, said forming a structure for first cavities comprising applying and patterning a first layer of disposable solid followed by applying and patterning a first layer of oxide, said patterning a first layer of oxide further comprising forming a first and a second opening

through said first layer of oxide, said first and second openings providing access to said first layer of disposable solid;

forming a structure for second cavities above and aligned with said structure for said first cavities, said forming a structure for second cavities comprising applying and patterning a second layer of disposable solid followed by applying and patterning a second layer of oxide, said patterning a second layer of oxide further comprising forming a ~~first and a second~~ third and fourth opening through said second layer of oxide, said third and fourth openings providing access to said second layer of disposable solid, thereby creating overlying patterned first and second layers of disposable solid separated by said first layer of oxide and interconnected by said first and second opening formed through said first layer of oxide, said overlying patterned first and second layers of disposable solid being accessible via said third and fourth opening formed through said second layer of oxide;

creating the first and the second cavities;

performing an oxide deposition over said second cavities, creating a second thin layer of oxide; and

forming a metal inductor on said second thin layer of oxide.

2. (currently amended) The method of claim 1, wherein said forming a metal layer on said dielectric layer is forming a patterned layer of interconnect metal ~~layer that has a cross section of a square or a rectangle having vertical sides~~.

3. (currently amended) The method of claim 1 wherein said forming the structure for first cavities comprises the steps of:

said applying said first layer of disposable solid over said first thin layer of oxide;

said patterning said first layer of disposable solid comprising creating an opening in said first layer of disposable solid, whereby said opening in said first layer of disposable solid aligns with said metal layer ~~and has a dimension when measured in a direction along said thin layer of oxide that is smaller than a dimension of said metal layer~~;

said applying said first layer of oxide includes depositing said first layer of oxide in said opening in said first layer of disposable solid, whereby said first layer of oxide has a dimension of thickness in addition to having a dimension of width; and

said patterning said first layer of oxide comprising creating a first and a second opening through said first layer of oxide, whereby said first and second openings through said

first layer of oxide are located at opposite extremities of said first layer of oxide, whereby a distance between a center of said first and second openings through said first layer of oxide is less than said dimension of width of said first layer of oxide.

4. (currently amended) The method of claim 1 wherein said forming the structure for second cavities comprises the steps of:

said applying said second layer of disposable solid includes depositing said second layer of disposable solid in said first and second openings created in said first layer of oxide;

said patterning said second layer of disposable solid comprises creating an opening in said second layer of disposable solid, whereby said opening in said second layer of disposable solid aligns with said metal layer and has a dimension when measured in a direction along said first layer of oxide that is approximately equal to a dimension of the opening created in said first layer of disposable solid;

said applying said second layer of oxide includes depositing said second layer of oxide in said opening created in said second layer of disposable solid, whereby said second layer

of oxide has a dimension of thickness in addition to having a dimension of width; and

said patterning said second layer of oxide comprising creating a ~~first and a second~~ third and fourth opening in said second layer of oxide, whereby said ~~first and a second~~ third and fourth openings in said second layer of oxide are located at opposite extremities of said second layer of oxide, whereby a distance between a center of said ~~first and a second~~ third and fourth openings in said second layer of oxide is less than said dimension of width of said second layer of oxide.

5. (currently amended) The method of claim 1, said creating a first and a second layer of cavities is removing said first and second layer of disposable solid, said removal to take place by accessing said ~~first and~~ second layer of disposable solid by ~~means of~~ said ~~first and a second~~ third and fourth opening ~~created~~ in said second layer of oxide, furthermore by accessing said first layer of disposable solid by ~~means of~~ said first and second openings in said first layer of oxide, creating a first layer and a second layer of dielectric comprising horizontal oxide fins, further creating a first layer and a second layer of ~~horizontal~~ air gaps being interspersed with said first layer and a second layer of dielectric.

6. (currently amended) The method of claim 1 wherein said performing an oxide deposition over said second layer of cavities is creating a thin layer of oxide over said second layer of oxide, thereby furthermore closing said ~~first and a second~~ third and fourth openings created in said second layer of oxide.

7. (previously presented) The method of claim 1, creating additional layers of cavities over a preceding layer of cavities, said additional layers being created prior to performing an oxide deposition over an upper or last layer of cavities, said creation of additional layers of cavities comprising the steps of:

depositing an additional layer of disposable solid over a layer of oxide of a preceding layer of cavities, thereby including first and second openings created in said layer of oxide of a preceding layer of cavities;

creating an opening in said additional layer of disposable solid, said opening being aligned with said metal layer and having a dimension when measured in a direction along said layer of oxide of a preceding layer of cavities that is approximately equal to a dimension of an opening created in a preceding layer of disposable solid;

depositing an additional layer of oxide over said additional layer of disposable solid, thereby including said opening created in said additional layer of disposable solid, said additional layer of oxide having a dimension of thickness in addition to having a dimension of width; and

creating a first and a second opening in said additional layer of oxide, said first and second openings being located at opposite extremes of said additional layer of oxide, a distance between a center of said first and second openings being less than said dimension of width of said additional layer of oxide, creating a first layer and a second layer of dielectric comprising horizontal oxide fins, further creating a first layer and a second layer of horizontal air gaps being interspersed with said first layer and a second layer of dielectric.

8. (previously presented) The method of claim 1, said first and second layers of disposable solid comprising a polymer.

9. (previously presented) The method of claim 8, said creating a first and a second layer of cavities is heating said substrate in oxygen, evaporating said disposable solid layer using O_2 plasma.

10. (previously presented) The method of claim 8, said creating a first and a second layer of cavities is introducing a solvent to said substrate, dissolving said polymer.

11. (previously presented) The method of claim 8 wherein creating a first and a second layer of cavities is heating said substrate, evaporating said polymer.

12. (previously presented) The method of claim 11 wherein creating a first and a second layer of cavities is applying a vacuum to said substrate, dissolving said polymer.

13. (previously presented) The method of claim 1 wherein an insulating layer is deposited over said inductor thereby encapsulating said inductor.

14. (previously presented) The method of claim 1, said partially fabricated integrated circuit structure comprising transistors being bipolar or CMOS devices interconnected to form an RF amplifier.

15. (previously presented) The method of claim 1, said inductor being a spiral.

16. (previously presented) The method of claim 15, said spiral of said inductor being circular or polygonal.

17. (previously presented) The method of claim 16, the polygonal inductor being a square or a hexagon or an octagon.

18. (previously presented) The method of claim 1, said inductor having an inductance in excess of 1 nH and a self-resonance in excess of 10 MHz.

Claims 19-21 (cancelled).

22. (previously presented) The method of claim 1, said first layer of disposable solid and said second layer of disposable solid comprising nitride.